

## Colorado Oil & Gas Conservation

Sample Delivery Group: L871680  
Samples Received: 11/10/2016  
Project Number: CALF CANYON  
Description: Maralex Calf Canyon

Report To: Carlos Lujan  
707 Wapiti Court, Ste 204  
Rifle, CO 81650

REM 9932

Spill/Release Point # 448285

Location ID 322331

Document 2527344

Entire Report Reviewed By:



Daphne Richards  
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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## SS 1 CALF CANYON L871680-01 Solid

Collected by  
Carlos LujanCollected date/time  
11/09/16 13:15Received date/time  
11/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG925424	1	11/10/16 14:56	11/15/16 15:23	JJL
Calculated Results	WG926032	1	11/12/16 09:44	11/14/16 21:21	ST
Mercury by Method 7471A	WG925520	1	11/10/16 15:40	11/11/16 08:19	NJB
Metals (ICP) by Method 6010B	WG925424	1	11/10/16 14:56	11/10/16 20:59	JDG
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG925228	1	11/10/16 19:01	11/11/16 03:26	KMP
Semi-Volatile Organic Compounds (GC) by Method 8015	WG925641	10	11/10/16 16:21	11/11/16 00:30	JM
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG925811	485	11/11/16 00:06	11/14/16 18:12	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG925741	24.25	11/11/16 17:00	11/11/16 18:04	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG925741	97	11/11/16 17:00	11/13/16 08:00	BMB
Wet Chemistry by Method 3060A/7196A	WG926253	1	11/15/16 13:14	11/15/16 15:23	JJL
Wet Chemistry by Method 9045D	WG925156	1	11/14/16 13:02	11/14/16 14:51	MHM
Wet Chemistry by Method 9050AMod	WG925870	1	11/14/16 17:20	11/14/16 17:20	KK

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Qc<sup>7</sup> Gl<sup>8</sup> Al<sup>9</sup> Sc

## SS 2 CALF CANYON L871680-02 Solid

Collected by  
Carlos LujanCollected date/time  
11/09/16 13:15Received date/time  
11/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG926032	1	11/12/16 09:44	11/14/16 20:12	ST
Metals (ICP) by Method 6010B	WG925424	1	11/10/16 14:56	11/10/16 21:02	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG925228	1	11/10/16 19:01	11/11/16 03:48	KMP
Semi-Volatile Organic Compounds (GC) by Method 8015	WG925641	20	11/10/16 16:21	11/11/16 11:49	JM
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG925811	24.75	11/11/16 00:06	11/12/16 01:14	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG925741	24.75	11/11/16 17:00	11/11/16 18:24	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG925741	24.75	11/11/16 17:00	11/13/16 08:21	BMB
Wet Chemistry by Method 9045D	WG925156	1	11/14/16 13:02	11/14/16 14:51	MHM
Wet Chemistry by Method 9050AMod	WG925870	1	11/14/16 17:20	11/14/16 17:20	KK

## BK 1 CALF CANYON L871680-03 Solid

Collected by  
Carlos LujanCollected date/time  
11/09/16 13:15Received date/time  
11/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG926032	1	11/12/16 09:44	11/14/16 20:15	ST
Metals (ICP) by Method 6010B	WG925424	1	11/10/16 14:56	11/10/16 21:05	LTB
Wet Chemistry by Method 9045D	WG925156	1	11/14/16 13:02	11/14/16 14:51	MHM
Wet Chemistry by Method 9050AMod	WG925870	1	11/14/16 17:20	11/14/16 17:20	KK

## BK 2 CALF CANYON L871680-04 Solid

Collected by  
Carlos LujanCollected date/time  
11/09/16 13:15Received date/time  
11/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG926032	1	11/12/16 09:44	11/14/16 20:18	ST
Metals (ICP) by Method 6010B	WG925424	1	11/10/16 14:56	11/10/16 21:08	LTB
Wet Chemistry by Method 9045D	WG925156	1	11/14/16 13:02	11/14/16 14:51	MHM
Wet Chemistry by Method 9050AMod	WG925870	1	11/14/16 17:20	11/14/16 17:20	KK



All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne Richards  
Technical Service Representative

### Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
<a href="#">L871680-01</a>	<a href="#">SS 1 CALF CANYON</a>	9045D
<a href="#">L871680-02</a>	<a href="#">SS 2 CALF CANYON</a>	9045D
<a href="#">L871680-03</a>	<a href="#">BK 1 CALF CANYON</a>	9045D
<a href="#">L871680-04</a>	<a href="#">BK 2 CALF CANYON</a>	9045D

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	41.4		1	11/14/2016 21:21	WG926032

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chromium,Trivalent	8.35		2.00	1	11/15/2016 15:23	<a href="#">WG925424</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.64		2.00	1	11/15/2016 15:23	<a href="#">WG926253</a>

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.66		1	11/14/2016 14:51	<a href="#">WG925156</a>

## Sample Narrative:

9045D L871680-01 WG925156: 8.66 at 19.7c

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	8520		1	11/14/2016 17:20	<a href="#">WG925870</a>

## Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	11/11/2016 08:19	<a href="#">WG925520</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.76		2.00	1	11/10/2016 20:59	<a href="#">WG925424</a>
Barium	525		0.500	1	11/10/2016 20:59	<a href="#">WG925424</a>
Cadmium	0.872		0.500	1	11/10/2016 20:59	<a href="#">WG925424</a>
Chromium	11.0		1.00	1	11/10/2016 20:59	<a href="#">WG925424</a>
Copper	15.2		2.00	1	11/10/2016 20:59	<a href="#">WG925424</a>
Lead	49.5		0.500	1	11/10/2016 20:59	<a href="#">WG925424</a>
Nickel	8.88		2.00	1	11/10/2016 20:59	<a href="#">WG925424</a>
Selenium	ND		2.00	1	11/10/2016 20:59	<a href="#">WG925424</a>
Silver	ND		1.00	1	11/10/2016 20:59	<a href="#">WG925424</a>
Zinc	125		5.00	1	11/10/2016 20:59	<a href="#">WG925424</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	645		48.5	485	11/14/2016 18:12	<a href="#">WG925811</a>
(S) a,a,a-Trifluorotoluene(FID)	95.0		59.0-128		11/14/2016 18:12	<a href="#">WG925811</a>



## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.396		0.0242	24.25	11/11/2016 18:04	<a href="#">WG925741</a>
Toluene	3.00		0.121	24.25	11/11/2016 18:04	<a href="#">WG925741</a>
Ethylbenzene	1.38		0.0242	24.25	11/11/2016 18:04	<a href="#">WG925741</a>
Total Xylenes	13.5		0.291	97	11/13/2016 08:00	<a href="#">WG925741</a>
(S) Toluene-d8	99.1		88.7-115		11/13/2016 08:00	<a href="#">WG925741</a>
(S) Toluene-d8	75.9	<a href="#">J2</a>	88.7-115		11/11/2016 18:04	<a href="#">WG925741</a>
(S) Dibromofluoromethane	107		76.3-123		11/11/2016 18:04	<a href="#">WG925741</a>
(S) Dibromofluoromethane	106		76.3-123		11/13/2016 08:00	<a href="#">WG925741</a>
(S) a,a,a-Trifluorotoluene	94.1		87.2-117		11/13/2016 08:00	<a href="#">WG925741</a>
(S) a,a,a-Trifluorotoluene	73.5	<a href="#">J2</a>	87.2-117		11/11/2016 18:04	<a href="#">WG925741</a>
(S) 4-Bromofluorobenzene	128		69.7-129		11/11/2016 18:04	<a href="#">WG925741</a>
(S) 4-Bromofluorobenzene	112		69.7-129		11/13/2016 08:00	<a href="#">WG925741</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	2010		40.0	10	11/11/2016 00:30	<a href="#">WG925641</a>
(S) o-Terphenyl	175	<a href="#">J1</a>	50.0-150		11/11/2016 00:30	<a href="#">WG925641</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00656		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Acenaphthene	0.0138		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Acenaphthylene	0.00841		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Benzo(a)anthracene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Benzo(a)pyrene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Benzo(b)fluoranthene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Benzo(g,h,i)perylene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Benzo(k)fluoranthene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Chrysene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Dibenz(a,h)anthracene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Fluoranthene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Fluorene	0.0137		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Naphthalene	0.0948		0.0200	1	11/11/2016 03:26	<a href="#">WG925228</a>
Phenanthrene	0.0333		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
Pyrene	ND		0.00600	1	11/11/2016 03:26	<a href="#">WG925228</a>
1-Methylnaphthalene	0.196		0.0200	1	11/11/2016 03:26	<a href="#">WG925228</a>
2-Methylnaphthalene	0.242		0.0200	1	11/11/2016 03:26	<a href="#">WG925228</a>
2-Chloronaphthalene	ND	<a href="#">J3</a>	0.0200	1	11/11/2016 03:26	<a href="#">WG925228</a>
(S) p-Terphenyl-d14	57.1		32.2-131		11/11/2016 03:26	<a href="#">WG925228</a>
(S) Nitrobenzene-d5	95.1		22.1-146		11/11/2016 03:26	<a href="#">WG925228</a>
(S) 2-Fluorobiphenyl	48.9		40.6-122		11/11/2016 03:26	<a href="#">WG925228</a>



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	92.5		1	11/14/2016 20:12	WG926032

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.68		1	11/14/2016 14:51	<a href="#">WG925156</a>

## Sample Narrative:

9045D L871680-02 WG925156: 8.68 at 19.7c

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	5430 umhos/cm		1	11/14/2016 17:20	<a href="#">WG925870</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.35 mg/kg		2.00 mg/kg	1	11/10/2016 21:02	<a href="#">WG925424</a>
Barium	564		0.500	1	11/10/2016 21:02	<a href="#">WG925424</a>
Cadmium	ND		0.500	1	11/10/2016 21:02	<a href="#">WG925424</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	206 mg/kg		2.48 mg/kg	24.75	11/12/2016 01:14	<a href="#">WG925811</a>
(S) a,a,a-Trifluorotoluene(FID)	104		59.0-128		11/12/2016 01:14	<a href="#">WG925811</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		0.0248	24.75	11/11/2016 18:24	<a href="#">WG925741</a>
Toluene	ND		0.124	24.75	11/11/2016 18:24	<a href="#">WG925741</a>
Ethylbenzene	0.0495		0.0248	24.75	11/11/2016 18:24	<a href="#">WG925741</a>
Total Xylenes	0.661		0.0742	24.75	11/13/2016 08:21	<a href="#">WG925741</a>
(S) Toluene-d8	100		88.7-115		11/13/2016 08:21	<a href="#">WG925741</a>
(S) Toluene-d8	106		88.7-115		11/11/2016 18:24	<a href="#">WG925741</a>
(S) Dibromofluoromethane	107		76.3-123		11/11/2016 18:24	<a href="#">WG925741</a>
(S) Dibromofluoromethane	103		76.3-123		11/13/2016 08:21	<a href="#">WG925741</a>
(S) a,a,a-Trifluorotoluene	95.1		87.2-117		11/13/2016 08:21	<a href="#">WG925741</a>
(S) a,a,a-Trifluorotoluene	98.3		87.2-117		11/11/2016 18:24	<a href="#">WG925741</a>
(S) 4-Bromofluorobenzene	116		69.7-129		11/11/2016 18:24	<a href="#">WG925741</a>
(S) 4-Bromofluorobenzene	134	<a href="#">J1</a>	69.7-129		11/13/2016 08:21	<a href="#">WG925741</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	3610 mg/kg		80.0 mg/kg	20	11/11/2016 11:49	<a href="#">WG925641</a>
(S) o-Terphenyl	121	<a href="#">J7</a>	50.0-150		11/11/2016 11:49	<a href="#">WG925641</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0110		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Acenaphthene	0.0190		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Acenaphthylene	0.0138		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Benzo(a)anthracene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Benzo(a)pyrene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Benzo(b)fluoranthene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Benzo(g,h,i)perylene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Benzo(k)fluoranthene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Chrysene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Dibenz(a,h)anthracene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Fluoranthene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Fluorene	0.0166		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Naphthalene	0.0398		0.0200	1	11/11/2016 03:48	<a href="#">WG925228</a>
Phenanthrene	0.0667		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
Pyrene	ND		0.00600	1	11/11/2016 03:48	<a href="#">WG925228</a>
1-Methylnaphthalene	0.0930		0.0200	1	11/11/2016 03:48	<a href="#">WG925228</a>
2-Methylnaphthalene	0.103		0.0200	1	11/11/2016 03:48	<a href="#">WG925228</a>
2-Chloronaphthalene	ND	<u>J3</u>	0.0200	1	11/11/2016 03:48	<a href="#">WG925228</a>
(S) p-Terphenyl-d14	87.7		32.2-131		11/11/2016 03:48	<a href="#">WG925228</a>
(S) Nitrobenzene-d5	147	<u>J1</u>	22.1-146		11/11/2016 03:48	<a href="#">WG925228</a>
(S) 2-Fluorobiphenyl	71.8		40.6-122		11/11/2016 03:48	<a href="#">WG925228</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.241		1	11/14/2016 20:15	WG926032

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.69		1	11/14/2016 14:51	<a href="#">WG925156</a>

## Sample Narrative:

9045D L871680-03 WG925156: 8.69 at 19.5c

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		1	11/14/2016 17:20	<a href="#">WG925870</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.74		2.00	1	11/10/2016 21:05	<a href="#">WG925424</a>
Barium	110		0.500	1	11/10/2016 21:05	<a href="#">WG925424</a>
Cadmium	ND		0.500	1	11/10/2016 21:05	<a href="#">WG925424</a>

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Qc<sup>7</sup> Gl<sup>8</sup> Al<sup>9</sup> Sc



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0553		1	11/14/2016 20:18	WG926032

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.96		1	11/14/2016 14:51	<a href="#">WG925156</a>

## Sample Narrative:

9045D L871680-04 WG925156: 8.96 at 19.9c

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		1	11/14/2016 17:20	<a href="#">WG925870</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.09		2.00	1	11/10/2016 21:08	<a href="#">WG925424</a>
Barium	117		0.500	1	11/10/2016 21:08	<a href="#">WG925424</a>
Cadmium	ND		0.500	1	11/10/2016 21:08	<a href="#">WG925424</a>

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Qc<sup>7</sup> Gl<sup>8</sup> Al<sup>9</sup> Sc

Method Blank (MB)

(MB) R3178206-1 11/15/16 15:11

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

L871104-01 Original Sample (OS) • Duplicate (DUP)

(OS) L871104-01 11/15/16 15:15 • (DUP) R3178206-4 11/15/16 15:15

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chromium,Hexavalent	ND	ND	1	0.000		20

L872246-02 Original Sample (OS) • Duplicate (DUP)

(OS) L872246-02 11/15/16 15:24 • (DUP) R3178206-5 11/15/16 15:25

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chromium,Hexavalent	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3178206-2 11/15/16 15:12 • (LCSD) R3178206-3 11/15/16 15:12

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Chromium,Hexavalent	56.9	45.8	47.4	80.0	83.0	80.0-120			3.00	20

L872246-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872246-02 11/15/16 15:24 • (MS) R3178206-6 11/15/16 15:25 • (MSD) R3178206-7 11/15/16 15:25

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chromium,Hexavalent	20.0	ND	20.0	19.4	100	97.0	1	75.0-125			3.00	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L871196-01 Original Sample (OS) • Duplicate (DUP)

(OS) L871196-01 11/14/16 14:51 • (DUP) WG925156-3 11/14/16 14:51						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.84	6.84	1	0.000		1

L871811-02 Original Sample (OS) • Duplicate (DUP)

(OS) L871811-02 11/14/16 14:51 • (DUP) WG925156-4 11/14/16 14:51						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.96	9.01	1	0.556		1

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG925156-1 11/14/16 14:51 • (LCSD) WG925156-2 11/14/16 14:51										
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD	RPD Limits
Analyte	su	su	su	%	%	%			%	%
pH	6.11	6.05	6.06	99.0	99.2	98.4-102			0.165	1

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) WG925870-1 11/14/16 17:20

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	2.52			

L871381-01 Original Sample (OS) • Duplicate (DUP)

(OS) L871381-01 11/14/16 17:20 • (DUP) WG925870-4 11/14/16 17:20

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	umhos/cm	umhos/cm		%		%
Specific Conductance	901	902	1	0.111		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG925870-2 11/14/16 17:20 • (LCSD) WG925870-3 11/14/16 17:20

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	umhos/cm	umhos/cm	umhos/cm	%	%	%			%	%
Specific Conductance	542	559	552	103	102	90.0-110			1.26	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3177394-1 11/11/16 07:44

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0028	0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3177394-2 11/11/16 07:46 • (LCSD) R3177394-3 11/11/16 07:49

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Mercury	0.300	0.275	0.279	92	93	80-120			1	20

L871739-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L871739-06 11/11/16 07:52 • (MS) R3177394-4 11/11/16 07:54 • (MSD) R3177394-5 11/11/16 07:57

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.332	0.0210	0.302	0.339	85	96	1	75-125			11	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3177300-1 11/10/16 20:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Barium	U		0.17	0.500
Cadmium	U		0.07	0.500
Chromium	U		0.14	1.00
Copper	U		0.53	2.00
Lead	U		0.19	0.500
Nickel	U		0.49	2.00
Selenium	U		0.74	2.00
Silver	U		0.28	1.00
Zinc	U		0.59	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3177300-2 11/10/16 20:17 • (LCSD) R3177300-3 11/10/16 20:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	90.7	99.3	91	99	80-120			9	20
Barium	100	94.2	103	94	103	80-120			9	20
Cadmium	100	92.4	101	92	101	80-120			9	20
Chromium	100	93.6	102	94	102	80-120			8	20
Copper	100	92.3	100	92	100	80-120			8	20
Lead	100	93.3	102	93	102	80-120			9	20
Nickel	100	93.1	102	93	102	80-120			9	20
Selenium	100	90.4	99.9	90	100	80-120			10	20
Silver	100	91.4	99.6	91	100	80-120			9	20
Zinc	100	91.9	101	92	101	80-120			9	20

L871739-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L871739-06 11/10/16 20:22 • (MS) R3177300-6 11/10/16 20:30 • (MSD) R3177300-7 11/10/16 20:33

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	111	1.55	99.2	104	88	92	1	75-125			5	20
Barium	111	34.9	142	156	97	109	1	75-125			9	20
Cadmium	111	0.0921	102	107	92	96	1	75-125			4	20
Chromium	111	7.65	112	114	94	96	1	75-125			2	20
Copper	111	7.23	112	113	95	95	1	75-125			1	20
Lead	111	15.1	120	127	94	101	1	75-125			6	20



L871739-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L871739-06 11/10/16 20:22 • (MS) R3177300-6 11/10/16 20:30 • (MSD) R3177300-7 11/10/16 20:33

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nickel	111	2.29	107	112	94	99	1	75-125			5	20
Selenium	111	U	99.3	103	90	93	1	75-125			4	20
Silver	111	U	103	103	93	93	1	75-125			1	20
Zinc	111	33.1	129	141	86	97	1	75-125			9	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc





Method Blank (MB)

(MB) R3177649-3 11/11/16 20:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID) 113				59.0-128

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3177649-1 11/11/16 19:52 • (LCSD) R3177649-2 11/11/16 20:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.82	5.51	106	100	63.5-137			5.43	20
(S) a,a,a-Trifluorotoluene(FID)				114	114	59.0-128				

L871680-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L871680-02 11/12/16 01:14 • (MS) R3177649-4 11/12/16 00:11 • (MSD) R3177649-5 11/12/16 00:32

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	206	278	280	52.8	54.6	24.75	28.5-138	E	E	0.890	23.6
(S) a,a,a-Trifluorotoluene(FID)					108	107		59.0-128				

Method Blank (MB)

(MB) R3177611-3 11/11/16 11:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000270	0.00100
Ethylbenzene	U		0.000297	0.00100
Toluene	U		0.000434	0.00500
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	105			88.7-115
(S) Dibromofluoromethane	112			76.3-123
(S) a,a,a-Trifluorotoluene	99.6			87.2-117
(S) 4-Bromofluorobenzene	97.6			69.7-129

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3177611-1 11/11/16 10:14 • (LCSD) R3177611-2 11/11/16 10:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0258	0.0245	103	98.0	72.6-120			5.19	20
Ethylbenzene	0.0250	0.0256	0.0242	102	96.7	78.6-124			5.73	20
Toluene	0.0250	0.0241	0.0227	96.3	90.8	76.7-116			5.91	20
Xylenes, Total	0.0750	0.0747	0.0710	99.6	94.7	78.1-123			5.09	20
(S) Toluene-d8				105	105	88.7-115				
(S) Dibromofluoromethane				111	111	76.3-123				
(S) a,a,a-Trifluorotoluene				99.2	98.0	87.2-117				
(S) 4-Bromofluorobenzene				99.0	99.9	69.7-129				

L871679-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L871679-01 11/11/16 15:23 • (MS) R3177611-4 11/11/16 16:03 • (MSD) R3177611-5 11/11/16 16:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0285	0.633	28.5	25.2	98.8	87.0	990	47.8-131			12.5	22.8
Ethylbenzene	0.0285	4.71	30.1	27.1	90.0	79.4	990	44.8-135			10.4	26.9
Toluene	0.0285	8.89	32.7	30.0	84.4	74.9	990	47.8-127			8.52	24.3
Xylenes, Total	0.0854	30.9	103	95.0	84.9	75.8	990	42.7-135			7.79	26.6
(S) Toluene-d8					106	106		88.7-115				
(S) Dibromofluoromethane					114	115		76.3-123				
(S) a,a,a-Trifluorotoluene					96.2	97.9		87.2-117				
(S) 4-Bromofluorobenzene					98.1	99.7		69.7-129				



Method Blank (MB)

(MB) R3177423-1 11/10/16 23:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
(S) o-Terphenyl	77.2			50.0-150

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3177423-2 11/10/16 23:54 • (LCSD) R3177423-3 11/11/16 00:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	60.0	48.1	45.2	80.2	75.3	50.0-150			6.30	20
(S) o-Terphenyl				85.7	77.9	50.0-150				



Method Blank (MB)

(MB) R3177322-3 11/11/16 01:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.000600	0.00600
Acenaphthene	U		0.000600	0.00600
Acenaphthylene	U		0.000600	0.00600
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(g,h,i)perylene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Fluoranthene	U		0.000600	0.00600
Fluorene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.000600	0.00600
Pyrene	U		0.000600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) p-Terphenyl-d14	109			32.2-131
(S) Nitrobenzene-d5	75.3			22.1-146
(S) 2-Fluorobiphenyl	116			40.6-122

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3177322-1 11/11/16 00:41 • (LCSD) R3177322-2 11/11/16 01:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0883	0.0885	110	111	50.3-130			0.220	20
Acenaphthene	0.0800	0.0781	0.0763	97.7	95.3	52.4-120			2.43	20
Acenaphthylene	0.0800	0.0777	0.0770	97.1	96.2	49.6-120			0.910	20
Benzo(a)anthracene	0.0800	0.0773	0.0747	96.7	93.4	46.7-125			3.43	20
Benzo(a)pyrene	0.0800	0.0694	0.0689	86.8	86.1	42.3-119			0.780	20
Benzo(b)fluoranthene	0.0800	0.0794	0.0766	99.3	95.8	43.6-124			3.58	20
Benzo(g,h,i)perylene	0.0800	0.0789	0.0773	98.6	96.6	45.1-132			2.01	20
Benzo(k)fluoranthene	0.0800	0.0879	0.0836	110	104	46.1-131			5.04	20
Chrysene	0.0800	0.0875	0.0845	109	106	49.5-131			3.49	20
Dibenz(a,h)anthracene	0.0800	0.0791	0.0792	98.9	98.9	44.8-133			0.0600	20
Fluoranthene	0.0800	0.0901	0.0878	113	110	49.3-128			2.48	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3177322-1 11/11/16 00:41 • (LCSD) R3177322-2 11/11/16 01:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0817	0.0772	102	96.5	50.6-121			5.63	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0836	0.0803	104	100	46.1-135			4.05	20
Naphthalene	0.0800	0.0754	0.0743	94.3	92.9	49.6-115			1.49	20
Phenanthrene	0.0800	0.0802	0.0774	100	96.8	48.8-121			3.51	20
Pyrene	0.0800	0.0775	0.0756	96.9	94.5	44.7-130			2.50	20
1-Methylnaphthalene	0.0800	0.0830	0.0801	104	100	50.6-122			3.63	20
2-Methylnaphthalene	0.0800	0.0804	0.0860	100	108	50.4-120			6.73	20
2-Chloronaphthalene	0.0800	0.0834	0.0667	104	83.3	53.9-121		J3	22.3	20
(S) p-Terphenyl-d14				103	100	32.2-131				
(S) Nitrobenzene-d5				69.9	73.8	22.1-146				
(S) 2-Fluorobiphenyl				115	89.1	40.6-122				

L871557-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L871557-01 11/11/16 04:31 • (MS) R3177322-4 11/11/16 04:53 • (MSD) R3177322-5 11/11/16 05:15

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0983	ND	0.0906	0.0840	92.1	85.4	1	26.5-141			7.56	21.2
Acenaphthene	0.0983	ND	0.0802	0.0756	81.6	76.9	1	31.9-130			5.91	20
Acenaphthylene	0.0983	ND	0.0829	0.0796	84.3	80.9	1	33.7-129			4.09	20
Benzo(a)anthracene	0.0983	ND	0.0750	0.0675	76.3	68.7	1	18.3-136			10.5	24.6
Benzo(a)pyrene	0.0983	ND	0.0800	0.0724	81.3	73.6	1	16.9-135			9.94	25.2
Benzo(b)fluoranthene	0.0983	ND	0.0693	0.0572	70.5	58.2	1	10.0-134			19.2	30.9
Benzo(g,h,i)perylene	0.0983	ND	0.0676	0.0594	68.8	60.4	1	14.1-140			12.9	25.5
Benzo(k)fluoranthene	0.0983	ND	0.0864	0.0837	87.8	85.1	1	18.2-138			3.12	25.6
Chrysene	0.0983	ND	0.0914	0.0831	93.0	84.5	1	17.1-145			9.59	24.2
Dibenz(a,h)anthracene	0.0983	ND	0.0819	0.0703	83.3	71.5	1	18.5-138			15.2	24.3
Fluoranthene	0.0983	ND	0.0795	0.0775	80.9	78.8	1	15.4-144			2.62	27.1
Fluorene	0.0983	ND	0.0634	0.0724	64.5	73.6	1	23.5-136			13.2	20
Indeno(1,2,3-cd)pyrene	0.0983	ND	0.0731	0.0656	74.3	66.7	1	14.5-142			10.7	25.8
Naphthalene	0.0983	ND	0.0946	0.0840	96.2	85.4	1	29.2-128			11.8	20
Phenanthrene	0.0983	ND	0.0739	0.0674	75.1	68.5	1	20.1-134			9.22	23.6
Pyrene	0.0983	ND	0.0605	0.0600	61.5	61.0	1	11.0-148			0.760	26.1
1-Methylnaphthalene	0.0983	ND	0.107	0.0898	109	91.3	1	28.4-137			17.3	20
2-Methylnaphthalene	0.0983	ND	0.105	0.0844	107	85.8	1	26.6-137		J3	21.6	20
2-Chloronaphthalene	0.0983	ND	0.0840	0.0774	85.4	78.7	1	38.6-126			8.14	20
(S) p-Terphenyl-d14					87.1	85.4		32.2-131				
(S) Nitrobenzene-d5					79.1	79.5		22.1-146				
(S) 2-Fluorobiphenyl					85.9	86.0		40.6-122				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



## Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

## Qualifier      Description

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

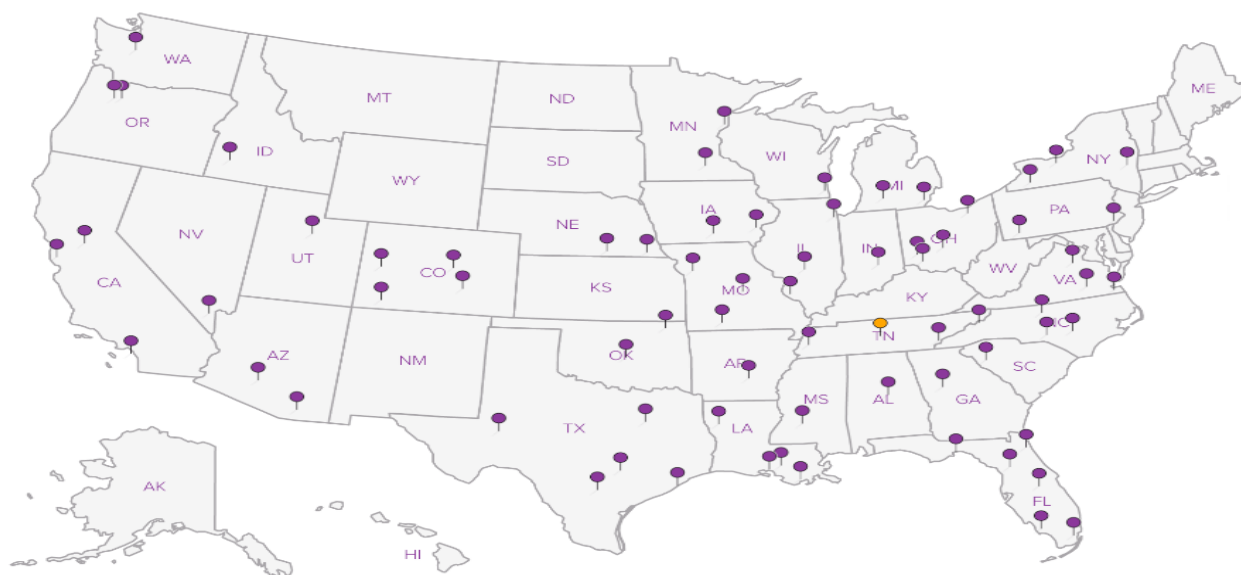
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**










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YOUR LAB OF CHOICE

## Cooler Receipt Form

Client:	607LGAS R w	SDG#	871680
Cooler Received/Opened On:	11/10/16	Temperature Upon Receipt:	3.1 °c
Received By: Nikki Farmer			
Signature: 			
<b>Receipt Check List</b>			
	Yes	No	N/A
Were custody seals on outside of cooler and intact?			<input checked="" type="checkbox"/>
Were custody papers properly filled out?	<input checked="" type="checkbox"/>		
Did all bottles arrive in good condition?	<input checked="" type="checkbox"/>		
Were correct bottles used for the analyses requested?	<input checked="" type="checkbox"/>		
Was sufficient amount of sample sent in each bottle?	<input checked="" type="checkbox"/>		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)			<input checked="" type="checkbox"/>
If applicable, was an observable VOA headspace present?			<input checked="" type="checkbox"/>
Non Conformance Generated. (If yes see attached NCF)			<input checked="" type="checkbox"/>